



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/595,459	01/26/2007	Clement Hiel	50486-00003	9980
84233 7590 12/24/2009 March Fischmann & Breyfogle LLP 8055 E. Tufts Avenue, Suite 450 Denver, CO 80237				
EXAMINER				
GRAY, JILL M				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
12/24/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/595,459

**Applicant(s)**

HIEL ET AL.

**Examiner**

Jill Gray

**Art Unit**

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 16, 20, 26 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16, 20, 26 and 29-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date 11/27/2009
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 27, 2009 has been entered.
2. Pursuant to the entry of the amendment of November 27, 2009, the status of the claims is as follows: Claims 1-15, 17-19, 21-25, and 27-28 are cancelled. Claims 16, 20, 26, and 29 are amended. Claims 16, 20, 26, and 29-35 are pending and under prosecution.

***Response to Amendment***

3. The rejection of claim 16 under 35 U.S.C. 102(b) as being anticipated by Buning et al., 4,195,141 and 2,247,436 is moot in view of applicants' amendments.
4. The rejection of claims 23-24 under 35 U.S.C. 103(a) as being unpatentable over Buning et al., 4,195,141 and 4,247,436 is moot in view of applicants' amendments.
5. The rejection of claims 16, 23-24 and 26-29 under 35 U.S.C. 103(a) as being unpatentable over Anderson 4,515,435 in view of Buning et al., 4,247,436 and 4,195,141 is moot in view of applicants' amendments.

6. The rejection of claims 16-26 under 35 U.S.C. 103(a) as being unpatentable over Quigley 5,540,870 in view of Buning et al., 4,247,436 and 4,195,141 is moot in view of applicants' amendments'

***Claim Objections***

7. Claim 29 is objected to because of the following informalities: The status identifier for claim 29 should be "amended" instead of "previously presented". Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. Claims 16, 20, 26, and 29-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT Publication WO 2003/091008 A1 (the publication).

The publication teaches an aluminum conductor composite core reinforced cable comprising a composite core comprising a matrix material and a plurality of longitudinally extending fibers of one or more fiber type embedded in the matrix and at least one layer of aluminum conductor surrounding the core, as required by present claim 30. The publication teaches that thermosetting resins such as epoxy can be used as the matrix material further teaching that said resin contains at least one hardener and one or more accelerators. See page 20, lines 14-25 and pages 46-47. Also, the publication teaches on page 46, an epoxy matrix system that is used as his epoxy resin. Said epoxy matrix system comprising ARALDITE MY 721/Hardener 99-023/Accelerator DY 070.

The publication does not specifically teach that the formulation has elongation properties in excess of glass fiber elongation properties.

The epoxy matrix system of the publication appears to be the same resin system disclosed by applicants as having elongation properties that exceed that of glass fibers and is suitable in the instant composite core. It has been established that products of identical chemical composition cannot have mutually exclusive properties. A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicants discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Note MPEP 2112.01. Accordingly, the examiner has reason to believe that the epoxy matrix system of the prior art has elongation properties in excess of glass fiber elongation properties, in the absence of clear, factual evidence to the contrary. Where the claimed and prior art product are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562, F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "Where the PTO shows a sound basis for believing that the products of the applicants and the prior art are the same, the applicant has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Regarding claim 16, the requirement that the fiber/resin matrix is cured at a curing temperature of from about 350°F to about 500°F to form the composite core is

drawn to the method of making the composite core. This constitutes a process limitation within a product claim, wherein patentability is based upon the product itself.

Regarding claim 20, the publication teaches that the composite core can have an inner carbon/epoxy layer and an outer glass/epoxy layer. See, for example claims 64-65.

Regarding claim 26, the teachings of the publication of a carbon/epoxy inner layer and glass/epoxy outer layer (note claims 64 and 65) would render obvious the requirement of a protective coating surrounding the core.

Regarding claim 29, as set forth above, the publication teaches a matrix resin system that is the same as or substantially similar to that contemplated by applicants. Accordingly, for the reasons stated above and incorporated herein, the examiner has reason to believe that properties such as the elongation are the same or substantially to those required by applicants, in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

As to claims 32-34, the publication teaches that the fibers can be glass fibers or carbon fibers as required by applicants. See for example, claims 64-65.

As to claim 35, the publication teaches that said composite core comprises one fiber type can have a modulus of elasticity in the range of about 6 to about 7 Msi. See page 13, lined 9-20. It should be noted that the publication teaches a modulus of elasticity for the composite core that ranges from about 22 Msi to about 37 Msi.

Regarding claim 31, the aluminum conductor surrounding the core is helically wound, as set forth by applicants. See entire document, and for example abstract and page 10, lines 7-18.

Therefore, the teachings of the publication would have rendered obvious the invention as claimed in present claims 16, 20, 26, and 29-35.

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524. The examiner can normally be reached on M-Th and alternate Fridays 10:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jill Gray/

Application/Control Number: 10/595,459

Page 7

Art Unit: 1794

Primary Examiner  
Art Unit 1794

jmg